AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-18 (Canceled)

Claim 19   (Original): A circuit for use in providing an additional channel comprising:

a sync and tracking unit coupled to a transmission input, the sync and tracking unit containing circuitry to synchronize the circuit to a timing of a transmission provided by the transmission input;

a matched filter coupled to the sync and tracking unit, the matched filter containing circuitry to determine the timing of the transmission;

a subframe generator containing circuitry to create a data unit for transmission on the additional channel; and

a data generation unit coupled to the transmission input, the sync and tracking unit, and the subframe generator, the data generation unit containing circuitry to encode and modulate the data unit and to insert the data unit into the transmission.

Claim 20   (Previously Presented): The circuit of claim 19, wherein the timing is a frame timing, and wherein the data unit is a frame.

Claim 21   (Previously Presented): The circuit of claim 19, wherein the timing is a slot timing, and wherein the data unit is a slot.

Claim 22   (Original): The circuit of claim 19, wherein the sync and tracking unit comprises:

a sequence register coupled to the matched filter, the sequence register containing a sequence that is based on channelization code of a stronger of two branches in the transmission;

a pulse shaping filter coupled to the transmission input and the matched filter, the pulse shaping filter to decode the transmission; and

a timing tracking unit coupled to the data generating unit, the time tracking unit containing circuitry to adjust sample timing of the data generating unit to keep it in sync with the transmission's timing.

Claim 23   (Original): The circuit of claim 22, wherein the sequence stored in the sequence register is the conjugate of a point wise product of the scrambling code and a channelization code of the stronger of the two branches.

Claim 24   (Original): The circuit of claim 22, wherein the sync and tracking unit can keep track of a shifting transmit timing in the transmission.

Claim 25   (Original): The circuit of claim 19, wherein the matched filter descrambles the transmission with a sequence based on a channelization code of a stronger of two branches in the transmission.

Claim 26   (Original): The circuit of claim 19, wherein the data generation unit adds the encoded and modulated data unit with the transmission.

Claim 27   (Original): The circuit of claim 26, wherein the data generation unit scrambles, gain modifies, and spreads the data unit with a channelization code and a scrambling code provided by a scrambling code generator.

Claim 28   (Original): The circuit of claim 19, wherein when there is no data unit to transmit, no data units are inserted into the transmission.

Claim 29   (Currently Amended): A wireless device comprising:

a modem coupled to a radio frequency (RF) circuit, the modem containing circuitry to encode and modulate a first data stream to provide to the RF circuit for data transmission purposes and demodulate and decode a first received signal from the RF circuit for data reception purposes, wherein the modem implements a first version of a technical specification for the modem data transmission and reception;

a coprocessor coupled to an output of the modem and to the RF circuit, the coprocessor containing circuitry to encode and modulate a second data stream to provide to the RF circuit for data transmission purposes and demodulate and decode a second received signal from the RF circuit for data reception purposes, wherein the coprocessor implements a second version of the technical specification for the coprocessor data transmission and reception; ~~and~~

~~the RF circuit~~[[,]] wherein the RF circuit contains circuitry to wirelessly

transmit the first and second data streams and wirelessly receive the first and

second received signals; and

wherein the coprocessor comprises:

a sync and tracking unit coupled to the modem, the sync and tracking unit

containing circuitry to synchronize the circuit to a timing of a transmission

provided by the modem;

a matched filter coupled to the sync and tracking unit, the matched filter

containing circuitry to determine the timing of the transmission;

a subframe generator containing circuitry to create a data unit for

transmission on the additional channel; and

a data generation unit coupled to the transmission input, the sync and

tracking unit, and the subframe generator, the data generation unit containing

circuitry to encode and modulate the data unit and to insert the data unit into the

transmission.

Claim 30   (Original): The wireless device of claim 29, wherein the second

version of technical specification is a superset of the first version of the technical

specification.

Claim 31   (Original): The wireless device of claim 30, wherein the

coprocessor implements a portion of the second version of the technical

specification not included in the first version of the technical specification.

Claim 32   (canceled)

Claim 33   (Original): The wireless device of claim 29, wherein the wireless

device is used in a wireless communications system.

Claim 34   (canceled)

Claim 35   (Original): The wireless device of claim 33, wherein the wireless

communications system is a CDMA Release C compliant system.

Claim 36   (canceled)

Claim 37   (currently amended): A wireless device comprising:

        a modem coupled to a radio frequency (RF) circuit, the modem containing

circuitry to encode and modulate a first data stream to provide to the RF circuit

for data transmission purposes and demodulate and decode a first received

signal from the RF circuit for data reception purposes, wherein the modem

implements a first version of a technical specification for the modem data

transmission and reception;

        a coprocessor coupled to an output of the modem and to the RF circuit,

the coprocessor containing circuitry to encode and modulate a second data

stream to provide to the RF circuit for data transmission purposes and

demodulate and decode a second received signal from the RF circuit for data

reception purposes, wherein the coprocessor implements a second version of the

technical specification for the coprocessor data transmission and reception;

        wherein the RF circuit contains circuitry to wirelessly transmit the first and

second data streams and wirelessly receive the first and second received

signals;

wherein the modem is coupled to the RF circuit via a multiplexer; and

~~The wireless device of claim 36~~[[,]] wherein the multiplexer is located

inside the coprocessor.

Claims 38-40 (canceled)